

AMENDMENTS TO CLAIMS

1. (Previously Presented) A method for providing an interactive broadcast/multicast service for high-speed data transmission between a base station and at least one mobile station in a mobile communication system including the at least one mobile station, the base station communicating with the at least one mobile station, and a server connected to the base station, the server providing data to the at least one mobile station, the method comprising the steps of:

transmitting, by the base station, high-speed data according to the interactive broadcast/multicast service transmitted from the server, to the at least one mobile station over a forward common channel all mobile stations can receive in common during the interactive broadcast/multicast service; and

transmitting reverse transmission data according to the interactive broadcast/multicast service over a reverse dedicated channel, by a serviced mobile station, receiving the interactive broadcast/multicast service through the forward common channel during the interactive broadcast/multicast service,

wherein the base station assigns a common power control channel (CPCCH) to the at least one mobile station to control power of the reverse dedicated channel.

2. (Original) The method of claim 1, wherein the base station provides a broadcast service through the forward common channel.

3. (Previously Presented) The method of claim 1, wherein the base station transmits to the at least one mobile station assignment information of a multicast fundamental channel for transmitting forward broadcast information, assignment information of a common assignment channel for transmitting a response message for reverse data, assignment information of the CPCCH for transmitting power control information of the reverse dedicated channel, and assignment information for identifying the serviced mobile station and assigning a reverse power

control channel.

4. (Previously Presented) The method of claim 3, wherein the base station transmits reverse power control information to the at least one mobile station over the CPCCH.

5. (Currently Amended) The method of claim 3, wherein the serviced mobile station transmits a power control bit to the base station over the reverse dedicated channel as power control information for one of ~~the~~ the CPCCH, a forward dedicated control channel, and the common assignment channel.

6. (Previously Presented) The method of claim 1, further comprising the step of transmitting, from the base station to the at least one mobile station, reverse power control information via the CPCCH and forward data via a forward dedicated control channel.

7. (Previously Presented) The method of claim 1, further comprising the step of transmitting, from the base station to the at least one mobile station reverse power control information via the CPCCH and a control message to be delivered to a particular mobile station or a response message for reverse data via a time-sharing common assignment channel or dedicated control channel.

8. (Original) The method of claim 1, further comprising the step of setting up, from the mobile station to the base station, a reverse fundamental channel, a dedicated control channel, and a supplemental channel.

9. (Previously Presented) A method for providing an interactive broadcast/multicast service for high-speed data transmission between a base station and at least one mobile station in a mobile communication system including a plurality of mobile stations, the base station

communicating with the plurality of mobile stations, and a server connected to the base station, the server providing data to the plurality of mobile stations, the method comprising the steps of:

upon receiving an interactive broadcast/multicast service request from at least one of the plurality of mobile stations, setting up, by the base station, a connection to the at least one of the plurality of mobile stations and opening a session for the requested interactive broadcast/multicast service between the base station and the server;

transmitting, by the base station, high-speed data according to the interactive broadcast/multicast service transmitted from the server, to the at least one of the plurality of mobile stations over a forward dedicated channel during the interactive broadcast/multicast service;

comparing, by the server, a number of the at least one of the plurality of mobile stations requesting the interactive broadcast/multicast service with a predetermined threshold; and

if the number of the at least one of the plurality of mobile stations requesting the interactive broadcast/multicast service is larger than the predetermined threshold, simultaneously transmitting, by the base station, high-speed data to be provided from the server to the at least one of the plurality of mobile stations, to at least one of the plurality of mobile stations over a forward common channel during the interactive broadcast/multicast service, and transmitting reverse transmission data according to the interactive broadcast/multicast service over respective reverse dedicated channels by the at least one of the plurality mobile stations receiving the interactive broadcast/multicast service through the forward common channel during the interactive broadcast/multicast service,

wherein the base station assigns a common power control channel (CPCCH) to the at least one mobile station to control power of the reverse dedicated channel.

10. (Previously Presented) The method of claim 9, wherein the base station provides a broadcast service through the forward common channel.

11. (Original) The method of claim 9, wherein the base station transmits information for changing a forward data transmission channel from a dedicated channel to a common channel and a handoff direction message, to the at least one of the plurality of mobile stations.

12. (Original) The method of claim 11, wherein the handoff direction message includes multicast fundamental channel assignment information, common assignment channel assignment information for transmitting a response message for reverse data, common power control channel assignment information for transmitting power control information of a reverse dedicated channel, and information for identifying the mobile station requesting the service and assigning a reverse power control channel.

13. (Previously Presented) The method of claim 11, wherein the base station transmits reverse power control information to the at least one of the plurality of mobile stations over the CPCCH.

14. (Previously Presented) The method of claim 12, wherein the mobile station requesting the service transmits a power control bit to the base station over a reverse dedicated channel as power control information for one of the CPCCH, a forward dedicated control channel, and a common assignment channel.

15. (Original) The method of claim 9, wherein the base station transmits to the at least one of the plurality of mobile stations a release command message for changing a data transmission channel from the base station to the mobile station, from a dedicated channel to a common channel.

16. (Previously Presented) A method for releasing an interactive broadcast/multicast service for high-speed data transmission between a base station and a mobile station in a mobile

communication system including a plurality of mobile stations, the base station communicating with the plurality of mobile stations, and a server connected to the base station, comprising the steps of:

transmitting, by the base station, high-speed data according to the interactive broadcast/multicast service to be transmitted from the server to the plurality of mobile stations, to at least one of the plurality of mobile stations over a forward common channel, and transmitting reverse transmission data according to the interactive broadcast/multicast service over respective reverse dedicated channels by at least one of the plurality of mobile stations receiving the interactive broadcast/multicast service through the forward common channel during the interactive broadcast/multicast service;

comparing, by the server, a number of the at least one of the plurality of mobile stations receiving the interactive broadcast/multicast service with a predetermined threshold, while providing the high-speed data;

if the number of the at least one of the plurality of mobile stations receiving the high-speed data provided over the forward common channel is smaller than the threshold, transmitting by the base station high-speed data to be provided from the server to at least one of the plurality of mobile stations requesting the interactive broadcast/multicast service over a forward dedicated channel during the interactive broadcast/multicast service; and

releasing, by the base station, a session opened for the interactive broadcast/multicast service between the base station and the server, if all of the at least one of the plurality of mobile stations receiving the service finish the interactive broadcast/multicast service reception,

wherein the base station assigns a common power control channel (CPCCH) to the at least one mobile station to control power of the reverse dedicated channel.

17. (Previously Presented) The method of claim 16, wherein the base station provides a broadcast service through the forward common channel.

18. (Previously Presented) A method for providing an interactive broadcast/multicast service for high-speed data transmission between a base station and a plurality of mobile stations in a mobile communication system including the plurality of mobile stations, the base station communicating with the plurality of mobile stations, and a server connected to the base station, comprising the steps of:

upon receiving an interactive broadcast/multicast service request from a first mobile station, setting up, by the base station, a connection to the first mobile station, and shifting a state with the first mobile station to a traffic state;

opening, by the base station, a session for the requested interactive broadcast/multicast service between the base station and the server, registering the first mobile station in the requested interactive broadcast/multicast service, and shifting the state with the first mobile station to a dormant state;

upon receiving an interactive broadcast/multicast service request from a second mobile station in the dormant state, paging, by the server, the first mobile station via the base station;

assigning, by the base station, a forward common channel and a reverse dedicated channel between the base station and the first mobile station; and

transmitting, by the base station, high-speed data according to the interactive broadcast/multicast service transmitted from the server, to the first mobile station over the assigned forward common channel, and transmitting, by the first mobile station, reverse transmission data according to the interactive broadcast/multicast service to be transmitted in a reverse direction over the assigned reverse dedicated channel during the interactive broadcast/multicast service,

wherein the base station assigns a common power control channel (CPCCH) to the at least one mobile station to control power of the reverse dedicated channel.

19 (Canceled)

20. (Previously Presented) A method for providing an interactive broadcast/multicast service for high-speed data transmission between a base station and a mobile station in a mobile communication system including the mobile station, the base station communicating with the mobile station, and a server connected to the base station, comprising the steps of:

setting up, by the base station, a connection to the mobile station and shifting a state with the mobile station to a traffic state, if a data transmission request corresponding to the interactive broadcast/multicast service to the server is received from the mobile station receiving high-speed data provided from the server, from the base station over a forward common channel;

opening, by the base station, a session for the requested data transmission between the base station and the server;

assigning, by the base station, a reverse dedicated channel between the base station and the mobile station; and

transmitting, by the mobile station, high-speed data according to the interactive broadcast/multicast service to be transmitted in a reverse direction, over the assigned reverse dedicated channel during the interactive-broadcast/multicast service,

wherein the base station assigns a common power control channel (CPCCH) to the at least one mobile station to control power of the reverse dedicated channel.

21. (Previously Presented) The method of claim 20, wherein the base station provides a broadcast service through the forward common channel.

22. (Previously Presented) A method for providing an interactive broadcast/multicast service for high-speed data transmission between a base station and a mobile station in a mobile communication system including the mobile station, the base station communicating with the mobile station, and a server connected to the base station, comprising the steps of:

receiving, by the mobile station, radio resource information for the interactive broadcast/multicast service from the base station;

sending, by the mobile station, an interactive broadcast/multicast service request to the base station using the received radio resource information;

setting up, by the base station, a connection to the mobile station, and shifting a state with the mobile station to a traffic state;

opening, by the base station, a session for the requested interactive broadcast/multicast service between the base station and the server;

assigning, by the base station, a forward common channel and a reverse dedicated channel between the base station and the mobile station;

transmitting, by the base station, high-speed data according to the interactive broadcast/multicast service to be provided from the server to the mobile station, to the mobile station over the assigned forward common channel during the interactive broadcast/multicast service; and

transmitting, by the mobile station, reverse transmission data according to the interactive broadcast/multicast service to be provided from the mobile station to the server, to the base station over the assigned reverse dedicated channel during the interactive broadcast/multicast service,

wherein the base station assigns a common power control channel (CPCCH) to the at least one mobile station to control power of the reverse dedicated channel.

23. (Previously Presented) The method of claim 22, wherein the base station provides a broadcast service through the forward common channel.

24. (Original) The method of claim 22, wherein the radio resource information comprises logical-to-physical mapping (LPM) information, multiplexing rule information, and multicast service reference identifier (MSR_ID) information according to multicast fundamental channels (M-FCH).

25-27 (Canceled)

28. (Previously Presented) A method for providing an interactive-broadcast/multicast service for high-speed data transmission between a base station and at least one mobile station in a mobile communication system including the at least one mobile station, the base station communicating with the at least one mobile station, and a server connected to the base station, the server providing data to the at least one mobile station, the method comprising the steps of:

transmitting, by the base station, high-speed data according to the interactive broadcast/multicast service transmitted from the server that includes at least one segment indicator indicating a segment size of frames used for the high-speed data, to the at least one mobile station over a forward common channel all mobile stations can receive in common during the interactive broadcast/multicast service; and

transmitting reverse transmission data according to the interactive broadcast/multicast service over a reverse dedicated channel, by a serviced mobile station, receiving the interactive broadcast/multicast service through the forward common channel during the interactive broadcast/multicast service,

wherein the base station assigns a common power control channel (CPCCH) to the at least one mobile station to control power of the reverse dedicated channel.